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09/362,080 07/27/99 D'SOUZA

H 27757-403

EXAMINER

WM02/0424

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ART UNIT

PAPER NUMBER

2674

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/362,080

Applicant(s)

D'SOUZA ET AL.

Examiner

Alexander Eisen

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.

- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-3, 6, 20-22, 24-27 and 29-34 are rejected under 35 U.S.C. 102(b) as anticipated by McManus et al. ("McManus"), US 5,479,186 (reference provided by the Applicant in IDS, paper # 6). McManus discloses a system for computing equation coefficients (column 4, lines 58 – column 5, line 8) to represent an input-output color characteristic of a color display device (20), a signal generator ((22), column 2, line 50) for generating an output signal that can be used by the color display device (20) to produce a predetermined pattern on a screen (21) of said color display device (20); a general purpose computer (24) providing a plurality of first outputs to said signal generator via conductor (26) such that said signal generator incrementally changes said output signal from a first extreme to a second extreme (column 2, line 62 – column 3, line 10; column 4, lines 27-34); a photometer device (28) positioned to measure the incremental brightness data for each level in order to provide said data to said general purpose computer (24); said general purpose computer correlates outputs with brightness data and calculates a plurality of coefficients that represent the signal input to first color output relationship of said color display device (column 5, lines 9-11).

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As to claim 2, since the computer computes a plurality of coefficients, they can be provided to said color display via conductor (26) to the driver (22).

As to claim 3, said coefficients are related to polynomial equations representing the transfer function for said color display.

As to claim 6, the system computes the coefficients for three basic R(ed)G(reen)B(lue) colors.

3. Claims 16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kerigan et al., ("Kerigan"), US 5,691,741. Kerigan discloses a computer system (FIG. 1) comprising a general purpose computer (5) comprising a color display device driver (70) connected via cable (135) to a color display device (130); said color display device (130) comprising a data storage device (300, FIG. 3) containing data that can be provided to said color display device driver in order to aide to standardize a color brightness among other display parameters (see FIGS. 1, 2 & 3, column 2, lines 33-58; column 5, lines 3-13; column 6, lines 32).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 7-13 and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McManus. McManus does not specifically disclose that the polynomial coefficients are communicated to said color display device for

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device for storage in a data storage device associated with said color display device. McManus rather discloses that the calculated coefficients are used for calculating look-up tables for each electron gun for consequently storing look-up tables by the computer. It would have been obvious to one of ordinary skill in the art at the time when the invention was made that storing data that is used in computing is inherent to a computing process and in this sense it is understood that the coefficients are stored in some storage device, the polynomial function itself is represented in said look-up tables and they are stored by the computer according to McManus. McManus does not explicitly disclose that the storage device is associated with said display, but it would have been understood by one of ordinary skill that all processed data in this case is associated with particular display, which is under a test.

As to claim 7, it is well known in the art that color correction is applicable to a color display of any type, be it VGA MultiSync CRT or LCD, or any other type, as long as it is used to display colors.

As to claim 10, it is well known in the art that color characteristics are changing with the temperature and most of the measurements in the world of testing are taken after the device under test is warmed up and its temperature is stabilized.

As to claim 11, it is obvious that data processed and stored in the computer system of McManus can be stored in any type of memory capable of storing digital data, DDC (dual-dielectric cells) memory devices included, and since it would not bring any unexpected results it would have been obvious to one of ordinary skills to use it.

6. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over McManus in view of Minato et al., ("Minato"), US 4,379,292. ). McManus discloses a system

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for computing polynomial equation coefficients to represent an input-output color characteristic of a color display device. McManus does not disclose expressly that a third order polynomial equation is used for representation, which predicts the brightness to within 0.3 foot-Lamberts for each input signal. McManus rather teaches that acceptable curve fitting results are obtained when the degree of the polynomial is in order from 5 to 7. Minato teaches a luminance characteristic curves for a color display that can be presented by a polynomial equations of a third order (see FIG. 1 and equation (19) in column 5, line 10. It would have been obvious to one of ordinary skill in the art that color brightness characteristic for each input signal can be presented by a plurality of coefficients utilized in a third order polynomial equation, and that the order can be arbitrarily picked up by a designer depending on required accuracy, 0.3 fL included.

7. Claims 17 and 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kerigan in view of McManus. Kerigan discloses a computer system comprising a general purpose computer comprising a color display device driver, connected via cable to a color display device; said color display device comprising a data storage device containing data that can be provided to said color display device driver in order to aide to standardize a color brightness among other display parameters. Kerigan does not disclose that the control data contained in the storage device of the display comprises the coefficients to a polynomial transfer function that describes a relationship between an input signal to a color display device and a color brightness of the screen. McManus teaches a system for computing polynomial equation coefficients to represent an input-output color characteristic of a color display device that can be used further for calculating the look-up tables converting the input signal to a color display into a color brightness displayed on the screen of the color display device. It would have been obvious to one

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of ordinary skill in the art at the time when the invention was made to store data representing computed by the system of McManus polynomial equation coefficients in the storage device of the apparatus of Kerigan in order to complement the general purpose of the data in the display device of Kerigan, which is to create a compatibility of any display with any computer system by storing related control data for particular display into the storage device integrated physically into display.

As to claim 19, it is obvious that data can be stored in any type of memory capable of storing digital data, DDC (dual-dielectric cells) memory devices included, and since it would not bring any unexpected results it would have been obvious to one of ordinary skills to use it.

8. Claims 23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over McManus in view of Sato et al., ("Sato"), US 4,989,072. McManus discloses a system for computing polynomial equation coefficients to represent an input-output color characteristic of a color display device. McManus does not disclose that during the test a first number of pixels is illuminated and a second number of pixels is not illuminated. McManus discloses, however, that measurements are done for every gun associated with a particular color, and it would be understood by one of ordinary skill in the art that measurements representing each gun can only be taken separately, while a group of pixels of a first color is being illuminated and the groups of other colors are not illuminated. Sato teaches an apparatus for testing and adjusting a color CRT tubes having a pattern generator for generating different testing patterns including sequentially displaying frames of primary color in the order of green, red and blue (column 11, lines 7-18; column 12, line 64 – column 13, line 7). It would have been obvious to one of ordinary skill in

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the art to illuminate pixel of one color and not of the other colors when measuring luminance characteristics of primary color in the apparatus of McManus in sequence as taught by Sato.

*Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Foley et al., US 5,510,851, disclose method for dynamic purity correction using cubic (third order) spline interpolation.

Taylor et al., US 4,843,573 disclose a method for transforming color space coordinates into the corresponding relative primary intensity levels.

Shalit, US 5,115,229, discloses a method for accurate reproduction of colors and luminance.

Kanno, US 5,602,567, discloses a display monitor having storage device containing data for controlling the monitor.

Sawdon, US 5,276,458, discloses a computer system having a display with non-volatile memory for storing the control information related to the display ID.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Eisen whose telephone number is (703) 306-2988. The examiner can normally be reached on M-F (8:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on (703) 305-4709. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6606 for regular communications and (703) 308-9051 for After Final communications.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9700.



Alexander Eisen  
April 19, 2001



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